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OPINIONS AND DECLARATIONS RENDERED BY THE INTER- NATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

Edited by

FRANCIS HEMMING, C.M.G., C.B.E.

Secretary to the Commission

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DIRECTION 12

Validation under the Plenary Powers of the generic name
Astacus Fabricius, 1775 (Class Crustacea, Order
Decapoda) (correction of an erroneous entry made in
the *Official List of Generic Names in Zoology* by the
Ruling given in *Opinion* 104)

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INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

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Dr. L. B. Holthuis (*Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands*) (12th August 1953)

DIRECTION 12

VALIDATION UNDER THE PLENARY POWERS OF THE GENERIC NAME "ASTACUS" FABRICIUS, 1775 (CLASS CRUSTACEA, ORDER DECAPODA) (CORRECTION OF AN ERRONEOUS ENTRY MADE IN THE "OFFICIAL LIST OF GENERIC NAMES IN ZOOLOGY" BY THE RULING GIVEN IN "OPINION" 104)

RULING :—(1) The entry bearing the Name No. 490 relating to the generic name *Astacus* Pallas, 1772, made on the *Official List of Generic Names in Zoology* by the Ruling given in *Opinion* 104 is hereby deleted and that Ruling is hereby amended to read as specified in (3) below.

(2) The following action is hereby taken under the Plenary Powers :—

(a) The under-mentioned names are hereby suppressed for the purposes both of the Law of Priority and of the Law of Homonymy :—

(i) *Astacus* Pallas, 1772 ;

(ii) *Astacus*, any otherwise available use of, as a generic name prior to *Astacus* Fabricius, 1775 ;

(b) The nominal species *Cancer astacus* Linnaeus, 1758, is hereby designated to be the type species of the genus *Astacus* Fabricius, 1775, in lieu of the objectively identical, but later established, nominal species *Astacus fluviatilis* Fabricius, 1775.

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(3) The under-mentioned revised entry is hereby made in the *Official List of Generic Names in Zoology* under the Name No. 490 : *Astacus* Fabricius, 1775 (gender : masculine) (type species, by designation under the Plenary Powers under (2)(b) above : *Cancer astacus* Linnaeus, 1758).

(4) The under-mentioned generic name is hereby placed on the *Official List of Generic Names in Zoology* with the Name No. 869 : *Cambaroides* Faxon, 1884 (gender : masculine) (type species, by selection by Faxon (1898) : *Astacus japonicus* de Haan, 1841).

(5) The under-mentioned specific names are hereby placed on the *Official List of Specific Names in Zoology* with the Name Nos. 479 and 480 respectively :—

- (a) *astacus* Linnaeus, 1758, as published in the combination *Cancer astacus* (specific name of type species, by designation under the Plenary Powers under (2)(b) above, of *Astacus* Fabricius, 1775) ;
- (b) *japonicus* de Haan, 1841, as published in the combination *Astacus japonicus* (specific name of type species of *Cambaroides* Faxon, 1884).

(6) The under-mentioned generic names are hereby placed on the *Official Index of Rejected and Invalid Generic Names in Zoology* with the Name Nos. severally specified below :—

- (a) the names suppressed under the Plenary Powers under (2)(a)(i) and (2)(a)(ii) above (Name Nos. 259 and 260 respectively) ;
- (b) *Potamobius* Samouelle, 1819 (a junior objective synonym of *Astacus* Fabricius, 1775, the type species of which, by designation under the

Plenary Powers under (2)(b) above, is the same species as that which is the type species of *Potamobius* Samouelle, 1819) (Name No. 261).

(7) The under-mentioned specific name is hereby placed on the *Official Index of Rejected and Invalid Specific Names in Zoology* with the Name No. 124 : *fluviatilis* Fabricius, 1775, as published in the combination *Astacus fluviatilis* (a junior objective synonym of *astacus* Linnaeus, 1758, as published in the combination *Cancer astacus*).

(8) The under-mentioned family-group name is hereby placed on the *Official List of Family-Group Names in Zoology* with the Name No. 9 : ASTACIDAE (correction by Samouelle (1819) of ASTACINI) Latreille, [1802—1803] (type genus : *Astacus* Fabricius, 1775).

(9) The under-mentioned family-group names are hereby placed on the *Official Index of Rejected and Invalid Family-Group Names in Zoology* with the Name Nos. 27 and 28 respectively :—

- (a) ASTACINI Latreille, [1802—1803¹] (type genus : *Astacus* Fabricius, 1775) (an Invalid Original Spelling for the family-name ASTACIDAE, to which form this name was corrected by Samouelle (1819), but available as the name for a taxon belonging to any category in the family-group for which the termination “-INI” may be considered appropriate) ;
- (b) POTAMOBIIDAE Stebbing, 1893 (type genus : *Potamobius* Samouelle, 1819) (a junior objective synonym of ASTACIDAE (correction of ASTACINI) Latreille, [1802—1803], the respective type genera of these family-group taxa having the same nominal species as type species.)

¹ For the attribution of the date [1802—1803] to vol. 3 of Latreille's *Hist. nat. gén. partic. Crust. Ins.* see Griffin, 1938 (*J. Soc. Bibl. nat. Hist.* 1(5) : 151).

I.—THE STATEMENT OF THE CASE

In January 1944, when engaged in the preliminary examination of the older *Opinions* containing Rulings placing names on the *Official List of Generic Names in Zoology*, Mr. Hemming, as Secretary, noted that in *Opinion* 104 in which the generic name *Astacus* Pallas, 1772, had been placed on the foregoing *Official List* an incorrect type species had been cited for that genus. In 1951 Mr. Hemming corresponded on this subject with Dr. L. B. Holthuis (*Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands*) and concerted with him the lines on which a proposal should be submitted to the Commission for the rectification of the foregoing error in the *Official List*. The application so agreed upon was completed by Mr. Hemming on 11th September 1952. It was as follows :—

Proposed use of the Plenary Powers to correct an erroneous entry relating to the name “*Astacus*” Pallas, 1772 (Class Crustacea, Order Decapoda), made in the “*Official List of Generic Names in Zoology*” in “*Opinion*” 104

By FRANCIS HEMMING, C.M.G., C.B.E.

(*Secretary to the International Commission on Zoological Nomenclature*)

The subject matter of the present application came to notice in connection with the routine checking of the entries on the *Official List of Generic Names in Zoology* in connection with the projected publication of the *Official List* in book form, and is concerned with the erroneous entry of the name *Astacus* Pallas, 1772 (Class Crustacea, Order Decapoda) on that *List* made in the Commission's *Opinion* 104 (1928, *Smithson. misc. Coll.* 73 (No. 5) : 27).

2. Entry relating to the generic name “*Astacus*” Pallas, 1772, made on the “*Official List of Generic Names in Zoology*” in “*Opinion*” 104 : In *Opinion* 104 (: 27) the reference given for the name *Astacus* was “Pallas, 1772, p. 81.” The reference so given is clearly to page 81 of Volume 9 of Pallas's *Spicilogia Zoologiae*, where the name *Astacus* was in fact used by Pallas. The particulars given for the name *Astacus* Pallas, 1772, in *Opinion* 104 were as follows :—“tat. [type species by

absolute tautonymy] *Cancer astacus* Linn. 1758a, 631, syn. *fluviatilis* Fab. 1775a, 413.”

3. **Incorrect type species given for “Astacus” Pallas, 1772, in “Opinion” 104 :** On referring to Volume 9 of Pallas’s *Spicil. Zool.*, I found that in the paper concerned Pallas confined himself to the description of a new Siberian species of crayfish, to which he gave the name *Astacus dauuricus*. No other species was mentioned by Pallas and the above nominal species is therefore unquestionably the type species of *Astacus* Pallas by monotypy, for, as will be recalled, the Commission had ruled in *Opinion* 47 as far back as 1912 (*Smithson. Publ.* 2060 : 108—109) that a genus is to be treated as monotypical if one species only was cited by name by its original author, even if that author made it clear that he considered that other species which he did not cite by name belonged to the genus also, a decision which, in substance, was written into the *Règles* by the Thirteenth International Congress of Zoology at Paris in 1948 (see 1950, *Bull. zool. Nomencl.* 4 : 153). Accordingly, the statement in *Opinion* 104 that *Cancer astacus* Linnaeus, 1758 (*Syst. Nat.* (ed. 10) 1 : 631) is the type species of the genus *Astacus* Pallas, 1772, is incorrect. In his description of his new species *Astacus dauuricus*, Pallas said (in the first sentence) : “Forma atque proportione astaco nostrati minori persimilis est,” and it is possible that the applicant in the case which was decided upon in *Opinion* 104 may have interpreted Pallas’s reference to (translated into English) “our crayfish” as constituting obliquely the inclusion of *Cancer astacus* Linnaeus, 1758, in the genus *Astacus* Pallas, 1772. Whether or not this is the explanation of the statement in *Opinion* 104 regarding the type species of *Astacus* Pallas, that statement is, as we have seen, incorrect. It is necessary therefore to consider what action should now be taken to correct or validate the entry on the *Official List* relating to this name.

4. **Two possible courses of action :** When I first considered this matter, it seemed to me that, other things being equal, there were two courses of action open to the Commission, each of which involved the admission that the entry on the *Official List* relating to the name *Astacus* Pallas was defective. (1) The Commission might confine itself to correlating the mistake in *Opinion* 104, that is, to giving an emended ruling stating that the type species of *Astacus* Pallas, 1772, was *Astacus dauuricus* Pallas, 1772, by monotypy, and not (as incorrectly stated in the foregoing *Opinion*) *Cancer astacus* Linnaeus, 1758, by absolute tautonymy. Clearly, the practicability of this course would depend upon whether, in the opinion of specialists, *Astacus dauuricus* Pallas, 1772, and *Cancer astacus* Linnaeus, 1758, were not only congeneric with one another but were also so closely allied that there was no reasonable risk that at some later date they would be placed in different genera with the result that *Cancer astacus* Linnaeus would cease to be subjectively referable to the genus *Astacus* Pallas.

(2) It would be possible for the Commission to decide that it was so important to ensure that *Cancer astacus* Linnaeus should be permanently retained in the genus *Astacus* that the proper course for it to adopt would be to use its Plenary Powers to designate that species to be the type species of *Astacus* Pallas, thereby giving valid force to the until then invalid entry in regard to this generic name made in the *Official List* in *Opinion* 104.

5. Advice received from Dr. L. B. Holthuis (Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands) : At this point I put this question (in a letter dated 6th June, 1951) to Dr. L. B. Holthuis (*Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands*). In his reply, dated 8th June 1951, which is being published simultaneously with the present paper, Dr. Holthuis informed me that the species *Astacus dauuricus* Pallas, 1772, was no longer considered to be congeneric with *Cancer astacus* Linnaeus, being currently referred to the genus *Cambaroides* Faxon, 1884 (*Proc. Amer. Acad. Arts Sci.*, Boston **20** : 149), of which the type species was *Astacus japonicus* De Haan, 1841 (*Faun. japon.*, Crust. (5) : 164, pl. 35, fig. 9), by subsequent selection by Faxon (1898, *Proc. U.S. nat. Mus.* **20** : 665). Dr. Holthuis accordingly considered that it was "highly desirable that the Commission should take steps to prevent the confusion, which undoubtedly will arise if *Astacus dauuricus* Pallas is accepted as the type species of *Astacus*." Of the two alternative courses outlined in my letter (i.e. the two alternatives set out in paragraph 4 above), Dr. Holthuis was altogether opposed to the first, and, if no other course were open, would favour the second. Dr. Holthuis went on, however, to outline a third course (which, like my alternative (2), would involve the use by the Commission of its Plenary Powers) which, in his opinion, offered the best solution obtainable. Dr. Holthuis pointed out that, notwithstanding the entry on the *Official List* of *Astacus* Pallas, 1772, under *Opinion* 104, most authors treated the name *Astacus* as having been first published by Fabricius in 1775 (*Syst. Ent.* : 413) ; if that practice could be validated, no difficulty would arise in regard to the type species of this genus, since the type species of *Astacus* Fabricius, 1775, was, by selection by Latreille (1810, *Consid. gén. Crust. Arach. Ins.* : 422) the nominal species *Astacus fluviatilis* Fabricius, 1775 (*Syst. Ent.* : 413), a nominal species which was objectively identical with the nominal species *Cancer astacus* Linnaeus, 1758 (the name *Astacus fluviatilis* Fabricius being only a *nom. nov.* for *Cancer astacus* Linnaeus). Dr. Holthuis accordingly suggested that the difficulty created by the mistake in *Opinion* 104 should be overcome by the Commission using its Plenary Powers to validate *Astacus* Fabricius, 1775 (*Astacus* Pallas, 1772, being at the same time removed from the *Official List*), rather than for the purpose of designating *Cancer astacus* Linnaeus to be the type species of *Astacus* Pallas, 1772.

6. Solution recommended : It is clearly essential that such steps as may be necessary should be taken to provide a legal foundation for the

current use of such an important name as *Astacus*; the only question therefore is how best this object can be secured. In view of the fact that (as Dr. Holthuis has explained) the majority of specialists still attribute this name to Fabricius, there would be an obvious advantage in stabilising the name *Astacus* as from that author. The force of this consideration is greatly strengthened by the fact that, if this course were to be adopted, there would no longer be any problem to solve as regards the type species of this genus. On general principles, it will also, I think, be felt that it is better to use the Plenary Powers for the purpose of giving valid force to action taken by an early author (in this case, by Fabricius in 1775) rather than to use those powers for the purpose of securing the same end by designating as the type species of a genus a species not included in it by its original author (in this case, by Pallas in 1772). My recommendation to the Commission is therefore that it should adopt Dr. Holthuis's suggestion and, by suppressing the name *Astacus* Pallas, 1772, under the Plenary Powers, so provide a firm foundation for the name *Astacus* Fabricius, 1775.

7. Uses of the generic name "Astacus" prior to Fabricius, 1775 : In the case of generic names published in the immediate sub-Linnean age, it is essential to take special steps to secure that the usage which it is proposed to accept for any given generic name has not been anticipated by some earlier author, for, owing to the imperfect state of knowledge regarding many of these rare XVIIIth century works, it is still extremely easy to overlook an early usage of a generic name, especially one which was taken over from the pre-1758 zoologists. In the present case I investigated this problem in conjunction with Dr. Karl Jordan, then President of the Commission, during the war (in 1944). From this investigation, it appeared that the name *Astacus* had been used as a generic name on three occasions prior to its use as such by Pallas in 1772. These uses were :—(1) *Astacus* Borlase, 1758, *Nat. Hist. Cornwall* : 274 ; (2) *Astacus* Gronovius, 1762, *Acta Helv.* 5 : 365 (not Vol. 4, published in 1760, as frequently stated in lists) ; (3) Gronovius, 1764, *Zoophylac. gronov.* : 227. At that time nothing was known as to the nature of Borlase's book, while Gronovius was a non-binominal "binary" author and, pending a decision (which was, in fact, taken in 1948) on the general problem of the meaning of the expression "binary nomenclature", the status of generic names published in his books was a matter of doubt. Quite recently I examined the position as regards the status of names in Borlase's *Natural History of Cornwall*, primarily as a general problem but partly also with special reference to the name *Astacus*. In the application which I have submitted to the Commission on this subject (Application Z.N.(S.) 543), which was published in September 1951 (Hemming, 1951, *Bull. zool. Nomencl.* 6 : 115—118),² I showed that Borlase could in no sense

² A decision on this case has since been taken by the Commission and has been embodied in *Opinion* 332 (1955, *Ops. Decls. int. Comm. zool. Nomencl.* 9 : 355—368).

be regarded as a binominal author, and I recommended that the name *Astacus* Borlase, 1758, and also the name *Astacus* as used by the non-binominal "binary" author Gronovius in 1762 and 1764 should be placed on the *Official Index of Rejected and Invalid Names in Zoology*. For the present purposes these three old uses of the name *Astacus* may therefore be set on one side, no further action being necessary in regard to them. Needless to say, however, it will be necessary to suppress under the Plenary Powers the undoubtedly available name *Astacus* Pallas, 1772, if the name *Astacus* Fabricius, 1775, is to be rendered available. For the reasons explained above, the possibility cannot be excluded that the investigation carried out by Dr. Jordan and myself in 1944 may have failed to detect every use of the name *Astacus* between 1758 and 1772, while it is possible also that this name may have been used by some author in the period 1772—1775, which was not covered by the survey which we then carried out. In these circumstances, it would, I think, be prudent to follow the precedent set in similar cases, e.g. the case of the Echinoid name *Spatangus* (see 1950, *Bull. zool. Nomencl.* 4 : 526), that is, to use the Plenary Powers to suppress not only the name *Astacus* Pallas, 1772, but also any other use of that name prior to Fabricius, 1775, which would otherwise be available and would therefore invalidate *Astacus* Fabricius, 1775, as a junior homonym.

8. Name to be used for the type species of "Astacus" Fabricius, 1775 : As has already been noted (paragraph 5 above), (1) the nominal species which is the type species of *Astacus* Fabricius, 1775, is *Astacus fluviatilis* Fabricius, 1775, but (2) that nominal species is objectively identical with the nominal species *Cancer astacus* Linnaeus, 1758, the name *Astacus fluviatilis* Fabricius being only a *nom. nov.* for the name *Cancer astacus* Linnaeus, coined by Fabricius when he introduced for it the generic name *Astacus*, this action being due, no doubt, to the dislike entertained by Fabricius, in common with most of his contemporaries, for tautonymy between generic names and specific trivial names. The Commission has in recent times made it a practice, when using the Plenary Powers in relation to a given generic name, to use those Powers also to secure that the nominal species which is the type species of that genus shall be whatever nominal species has the oldest available name for the taxonomic species which is, or which it is desired to make, the type species of that genus. In view of the fact that it will be necessary to use the Plenary Powers to suppress the name *Astacus* Pallas, 1772, if the name *Astacus* Fabricius, 1775, is to be validated, it is suggested that at the same time those Powers should be used to designate *Cancer astacus* Linnaeus, 1758, as the type species of this genus in lieu of the objectively identical, but later established, nominal species *Astacus fluviatilis* Fabricius, 1775.

9. Urgency of the present case : In view of the fact that the present application is designed to secure a correction of an erroneous entry on

the *Official List of Generic Names in Zoology* made in an earlier *Opinion* rendered by the Commission, the need for a decision is very pressing, for, until decisions have been taken by the Commission in this, and certain similar, cases, the publication of the *Official List* in book form will inevitably be delayed.

10. Action recommended : In the light of the foregoing considerations, the following recommendations are submitted to the International Commission on Zoological Nomenclature, namely that it should :—

- (1) delete the name *Astacus* Pallas, 1772, from the *Official List of Generic Names in Zoology*, *Opinion* 104 being at the same time amended to the extent necessary for this purpose ;
- (2) use its Plenary Powers :—
 - (a) to suppress for the purposes, both of the Law of Priority and of the Law of Homonymy :—
 - (i) *Astacus* Pallas, 1772 ;
 - (ii) *Astacus*, any otherwise available use of, as a generic name prior to *Astacus* Fabricius, 1775 ;
 - (b) to designate *Cancer astacus* Linnaeus, 1758, in lieu of the objectively identical, but later established nominal species *Astacus fluviatilis* Fabricius, 1775, to be the type species of *Astacus* Fabricius, 1775 ;
- (3) place the under-mentioned generic names on the *Official List of Generic Names in Zoology* :—
 - (a) *Astacus* Fabricius, 1775 (gender of generic name : masculine) (type species, by designation, as proposed in (2)(b) above, under the Plenary Powers : *Cancer astacus* Linnaeus, 1758) (to be inserted on the *Official List* in the place rendered vacant by the removal therefrom, under (1) above, of the name *Astacus* Pallas, 1772) ;
 - (b) *Cambaroides* Faxon, 1884 (gender of generic name : masculine) (type species, by selection by Faxon (1898) : *Astacus japonicus* de Haan, 1841) ;
- (4) place the following names on the *Official List of Specific Trivial Names in Zoology* :—
 - (a) *astacus* Linnaeus, 1758, as published in the combination *Cancer astacus* (trivial name of species proposed, under

- (2)(b) above, to be designated under the Plenary Powers to be the type species of *Astacus* Fabricius, 1775);
- (b) *japonicus* de Haan, 1841, as published in the combination *Astacus japonicus* (trivial name of type species of *Cambaroides* Faxon, 1884);
- (5) place the following names on the *Official Index of Rejected and Invalid Generic Names in Zoology* :—
- (a) the names specified in (2)(a) above, as there proposed to be suppressed under the Plenary Powers ;
- (b) *Astacus* Erichson, 1847, *Arch. Naturgesch.* **13** (1) : 101 (a junior homonym of *Astacus* Fabricius, 1775)³;
- (6) place the trivial name *fluviatilis* Fabricius, 1775, as published in the combination *Astacus fluviatilis* (trivial name of an objective junior synonym of *Cancer astacus* Linnaeus, 1758) on the *Official Index of Rejected and Invalid Specific Trivial Names in Zoology*.

II.—THE SUBSEQUENT HISTORY OF THE CASE

2. Registration of the present application : In the initial stage of the consideration of the present case the documents relating to it were placed in the Commission's File Z.N.(G.)15, a File established for the reception of miscellaneous documents relating to the *Official List of Generic Names in Zoology*. When later (in 1951) Mr. Hemming submitted an application to the Commission for the purpose of securing a rectification of the erroneous Ruling in *Opinion* 104 in regard to the generic name *Astacus*, the Regis-

³ This proposal was put forward under a misapprehension and was later withdrawn (paragraph 8).

tered Number Z.N.(S.) 544 was allotted to this subject, the earlier documents being transferred to the new File so opened.

3. Support for the present application received prior to publication : Prior to the publication of the present application support for the action proposed was received from :—(1) Dr. L. B. Holthuis (*Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands*) ; (2) Dr. Joshua L. Baily, Jr. (*San Diego, California, U.S.A.*). Dr. Holthuis's letter is reproduced in the immediately following paragraph, while the substance of Dr. Baily's communication is summarised in paragraph 5 below.

4. Support received from Dr. L. B. Holthuis (Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands) : The following is a letter dated 8th June 1951 in which during the preliminary consultations leading up to the preparation of the present application Dr. L. B. Holthuis (*Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands*) indicated his support for the action proposed :—

Thank you so much for your letter Z.N.(S.) 544 of 6th June concerning *Astacus Pallas, 1772 (Spicil. Zool. 9 : 81)* type species : *Astacus dauuricus Pallas, 1772 (Spicil. Zool. 9 : 81)* monotypic.

As to your questions concerning Pallas's species I can give you the following information. *Astacus dauuricus* Pallas is a well recognisable species and the trivial name *dauuricus*, being the oldest name available for the species, at present still is in common usage. The species, however, is no longer retained in the genus *Astacus*, but is placed in a separate genus *Cambaroides* Faxon (1884, *Proc. Amer. Acad. Arts Sci.* 20 : 149) type : *Astacus japonicus* De Haan (1841, *Fauna japon. Crust.* (5) : 164, pl. 35, fig. 9) by subsequent designation Faxon (1898, *Proc. U.S. nat. Mus.* 20 : 665). Faxon (1884) described *Cambaroides* as a subgenus of *Astacus*, but Stebbing (1893, *Hist. Crust.* : 208) raised it to the rank of a genus, in which he is followed by all modern authors.

To me it seems highly desirable that the Commission should undertake steps to prevent the confusion, which undoubtedly will be the result if *Astacus dauuricus* Pallas is chosen to be the type species of the

genus *Astacus*. From the two alternatives mentioned in your letter therefore I certainly would choose the second, and let the Commission use its Plenary Powers to make *Cancer astacus* Linnaeus (1758, *Syst. Nat.* (ed. 10) 1 : 631) the type species of the genus *Astacus*.

I would suggest therefore that the Commission should not place *Astacus* Pallas, 1772, on the *Official List*, but *Astacus* Fabricius, 1775 (*Syst. Ent.* : 413) type species : *Astacus fluviatilis* Fabricius (1775, *Syst. Ent.* : 413) (= *Cancer astacus* Linnaeus, 1758, *Syst. Nat.* (ed. 10) 1 : 631) type by subsequent selection (Latreille, 1810, *Consid. gén. Crust. Arachn. Ins.* : 422). Nearly all authors using the generic name *Astacus* attribute it to Fabricius, 1775.

5. Support received from Dr. Joshua L. Baily, Jr. (San Diego, California, U.S.A.) : In a letter dated 24th October 1951, Dr. Joshua L. Baily, Jr. (*San Diego, California, U.S.A.*), with whom Mr. Hemming had been in correspondence in regard both to the name *Limulus* Müller and the name *Astacus*, addressed a letter to the Commission in which (a) he expressed the view that the importance of the *Official List of Generic Names in Zoology* was so great that a rule should be established protecting names when once placed on it and (b) supported the action proposed to regularise the position of the entries already made in that *List* in regard to the name *Limulus* and *Astacus*. Dr. Baily's letter was published in the *Bulletin of Zoological Nomenclature* in 1952 (Baily, 1952, *Bull. zool. Nomencl.* 6 : 221—222) and has since been included also (in paragraph 11) of *Opinion 320* relating to the name *Limulus* Müller (1954, *Ops. Decls. int. Comm. zool. Nomencl.* 9 : 159—160).

6. Publication of the present application : The present application and Dr. Holthuis's note of support therefor were sent to the printer in September in 1952 and were published on 30th December of that year in Double-Part 4/5 of volume 9 of the *Bulletin of Zoological Nomenclature* (Hemming, 1952, *Bull. zool. Nomencl.* 9 : 113—117 ; Holthuis, 1952, *ibid.* 9 : 118).

7. Issue of Public Notices : Under the revised arrangements prescribed by the Thirteenth International Congress of Zoology,

Paris, 1948, Public Notice of the possible use by the International Commission on Zoological Nomenclature of its Plenary Powers in the present case was given on 30th December 1952 (a) in Double-Part 4/5 of volume 9 of the *Bulletin of Zoological Nomenclature* (the Part in which the present application was published), and (b) to the other prescribed serial publications. In addition, Public Notice was given to certain other general zoological serial publications. The publication of these Notices elicited no objection to the action proposed.

8. Correction of an error relating to the alleged generic name "Astacus" Erichson, 1847 : On 3rd March 1953 Dr. L. B. Holthuis wrote to the Secretary re-affirming his support for the action proposed in the present case but pointing out that the proposal submitted in Point (5)(b) in paragraph 10 of the application, namely the proposal that the generic name *Astacus* Erichson, 1847, should be placed on the *Official Index of Rejected and Invalid Generic Names in Zoology* must have been included by some inadvertence. Dr. Holthuis noted that the paper cited contained no reference to the name *Astacus*, while in a paper published in the previous year (1846, *Arch. Naturgesch.* 12(1) : 90) in which Erichson had dealt with this genus, he had not published the name *Astacus* as a new name, but correctly attributed it to Fabricius. In acknowledging receipt of Dr. Holthuis's letter, Mr. Hemming stated that he had re-examined the references in question and agreed that the recommendation numbered (5)(b) had been put forward in error. Mr. Hemming added that the necessary correction would be made when this case was submitted to the Commission for vote.

III.—THE DECISION TAKEN BY THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

9. Issue of Voting Paper V.P.(54)58 : At the beginning of April 1954, Mr. Hemming, as Secretary, prepared a Voting Paper

regarding the present case for submission to the Commission. In the Notes endorsed on this Voting Paper Mr. Hemming stated (Note 4) : " It has been found that Erichson (1847) did not publish the name *Astacus* as a new name. The proposal in Point (5)(b) of the present application was therefore misconceived and has accordingly been withdrawn". The Voting Paper so prepared was allotted the Number V.P.(54)58. In this Voting Paper, which was issued on 5th April 1954, the Members of the Commission were invited to vote either for, or against, the proposal " relating to the generic name *Astacus* as specified in Points (1) to (6) on page 117 of volume 9 of the *Bulletin of Zoological Nomenclature* [i.e. in Points numbered as above in paragraph 10 of the application reproduced in the first paragraph of the present *Direction*], subject to the omission of the proposal in Point (5)(b) which, as explained in Note 4 by the Secretary (overleaf) [i.e. in the Note quoted above in the present paragraph], has now been withdrawn".

10. The Prescribed Voting Period for Voting Paper V.P.(54)58 :

As the foregoing Voting Paper was issued under the Three-Month Rule, the Prescribed Voting Period closed on 5th July 1954.

11. Particulars of the Voting on Voting Paper V.P.(54)58 :

The state of the voting on Voting Paper V.P.(54)58 at the close of the Prescribed Voting Period was as follows :—

(a) *Affirmative Votes had been given by the following seventeen (17) Commissioners (arranged in the order in which Votes were received) :*

Holthuis ; Bonnet ; Hering ; Vokes ; Esaki ; Riley ;
Dymond ; Boschma ; Hemming ; Lemche ; Hankó ;
do Amaral ; Bradley (J.C.) ; Pearson ; Cabrera ;
Sylvester-Bradley ; Stoll ;

(b) *Negative Votes :*

None ;

(c) *Voting Papers not returned, two (2) :*

Jaczewski⁴ ; Mertens.⁵

12. Declaration of Result of Vote on Voting Paper V.P.(54)58 : On 6th July 1954, Mr. Hemming, Secretary to the International Commission, acting as Returning Officer for the Vote taken on Voting Paper V.P.(54)58, signed a Certificate that the Votes cast were as set out in paragraph 11 above and declaring that the proposal submitted in the foregoing Voting Paper had been duly adopted and that the decision so taken was the decision of the International Commission in the matter aforesaid.

13. Submission of proposals relating to the family-group-name aspect of the present case : On 8th October 1954, Mr. Hemming, as Secretary, submitted the following paper numbered Z.N.(S.) 544 to the Members of the Commission in regard to questions arising in connection with the family-group-name aspect of the present case :—

The family-group name based upon the generic name “*Astacus*”
Fabricius, 1775 (Class Crustacea, Order Decapoda)

By FRANCIS HEMMING, C.M.G., C.B.E.,
(Secretary to the International Commission on Zoological Nomenclature)

In the early part of the present year by its Vote on Voting Paper V.P.(54)58 the Commission approved the proposals in regard to the generic name *Astacus* which I had submitted (*Bull. zool. Nomencl.* 9 : 113—117) for the purpose of correcting an error in regard to the type species of this genus contained in the Commission's *Opinion* 104 and of securing that this name should rank for priority from Fabricius (1775) and not from Pallas (1772).

2. The application referred to above was drawn up, and published, before the Fourteenth International Congress of Zoology, Copenhagen, 1953, and therefore before the establishment of the *Official List of Family-Group Names in Zoology*. In order to complete the action

⁴ After the close of the Prescribed Voting Period an Affirmative Vote was received (on 13th July 1954) from Commissioner Jaczewski.

⁵ After the close of the Prescribed Voting Period an Affirmative Vote was received (on 23rd July 1954) from Commissioner Mertens.

on this case before the preparation of the *Opinion* required to give effect to the decision taken by the Commission in its vote on Voting Paper V.P.(54)58, it is necessary to ascertain whether any family-group name is involved in this case.

3. For this purpose I applied for advice to Dr. L. B. Holthuis (*Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands*) as a leading authority on the Decapods. Dr. Holthuis informed me that a family ASTACIDAE based upon the generic name *Astacus* Fabricius, 1775, is currently recognised by specialists in this group. This family name, in the incorrect form ASTACINI, was first published by Latreille in 1802—1803 (*Hist. nat. gén. partic. Crust. Ins.* 3 : 32). It was corrected to ASTACIDAE by Samouelle in 1819 (*Entomologist's useful Compendium* : 94). It will be understood that, as the name ASTACINI was published as a family-name, it is an Invalid Original Spelling because it had an incorrect termination, but that this word would be a valid spelling for the name of any taxon (e.g. a tribe) in this family-group, for which the termination “-INI” was considered appropriate.

4. Dr. Holthuis has drawn my attention also to the fact that the generic name *Potamobius* Samouelle, 1819 (*Entomologist's useful Compendium* : 95) (type species, by monotypy: *Cancer astacus* Linnaeus, 1758) becomes a junior objective synonym of *Astacus* Fabricius, 1775, consequent upon the designation of *Cancer astacus* Linnaeus, 1775, as the type species of that genus by the vote taken under the Voting Paper referred to in paragraph 1 above. Dr. Holthuis has drawn attention also to the fact that in 1893 (*Hist. Crust.* : 206) Stebbing erected the nominal family POTAMOBIIDAE. This latter name is thus a junior objective synonym of ASTACIDAE (correction of ASTACINI) Latreille, [1802—1803], the respective type genera of these two families having the same species as type species.

5. I recommend (a) that in accordance with the General Directive issued to the Commission by the Thirteenth International Congress of Zoology, Paris, 1948, relating to the placing of names on the *Official Index of Rejected and Invalid Generic Names in Zoology* the action specified in (1) below be taken by the Commission, and (b) that, in accordance with the General Directive issued by the Fourteenth International Congress of Zoology, Copenhagen, 1953, when establishing an *Official List* and an *Official Index* for family-group names in zoology, the action specified in (2) and (3) below be taken by the Commission :—

- (1) To be placed on the *Official Index of Rejected and Invalid Generic Names in Zoology* : *Potamobius* Samouelle, 1819 (a junior objective synonym of *Astacus* Fabricius, 1775, the two nominal genera concerned having the same species as type species) ;

- (2) To be placed on the *Official List of Family-Group Names in Zoology*: ASTACIDAE (correction by Samouelle (1819) of ASTACINI) Latreille, [1802—1803] (type genus: *Astacus* Fabricius, 1775);
- (3) To be placed on the *Official Index of Rejected and Invalid Family-Group Names in Zoology*:—
- (a) ASTACINI Latreille, [1802—1803] (type genus: *Astacus* Fabricius, 1775) (an Invalid Original Spelling for the family-name ASTACIDAE, to which form this name was corrected by Samouelle (1819), but available as a name for a taxon belonging to any category in the family-group for which the termination “-INI” may be considered appropriate);
- (b) POTAMOBIIDAE Stebbing, 1893 (type genus: *Potamobius* Samouelle, 1819 (a junior objective synonym of ASTACIDAE (correction of ASTACINI) Latreille, [1802—1803], the respective type genera of these family-group taxa having the same species as type species.

14. Issue of Voting Paper V.P.(O.M.)(54)24 (family-group names) : On 8th October 1954 a Voting Paper (V.P.(O.M.)(54)24) was issued in which each Member of the Commission was invited (a) to state whether he agreed “that, in conformity with the General Directive relating to the recording on the various *Official Lists* and *Official Indexes* of decisions in regard to particular names and particular books taken by the Commission prior to 1948, issued to the International Commission by the Thirteenth International Congress of Zoology, Paris, 1948, and with the General Directive supplementary thereto issued to the Commission by the Fourteenth International Congress of Zoology, Copenhagen, 1953, the entries relating to the family name ASTACIDAE and associated names specified in Points (1) to (3) in the paper bearing the reference number Z.N.(S.) 544 submitted by the Secretary simultaneously with the present Voting Paper [i.e. the paper reproduced in paragraph 13 of the present *Direction*], should be made in the *Official List* and in the *Official Indexes* as there proposed”, and (b), if he did not so agree as regards any given item, to indicate the item concerned.

15. The Prescribed Voting Period for V.P.(O.M.)(54)24 : As the foregoing Voting Paper was issued under the One-Month Rule, the Prescribed Voting Period closed on 8th November 1954.

16. Particulars of the Voting on Voting Paper V.P.(O.M.)(54)24 :
At the close of the Prescribed Voting Period the state of the voting on Voting Paper V.P.(O.M.)(54)24 was as follows :—

(a) *Affirmative Votes had been given by the following eighteen (18) Commissioners (arranged in the order in which votes were received)*⁶:

Holthuis⁷; Riley ; Boschma ; Lemche ; Stoll ; Vokes ;
Hering ; Mertens ; Sylvester-Bradley ; Bradley (J.C.) ;
Bonnet ; Jaczewski ; Esaki ; Hemming ; do Amaral ;
Cabrera ; Dymond ; Hankó ;

(b) *Negative Votes :*

None ;

(c) *Voting Papers not returned :*

None.

17. Declaration of Result of Vote on Voting Paper V.P.(O.M.)(54)24 : On 8th November 1954, Mr. Hemming, Secretary to the International Commission, acting as Returning Officer for the Vote taken on Voting Paper V.P.(O.M.)(54)24, signed a Certificate that the Votes cast were as set out in paragraph 16 above and declaring that the proposal submitted in the foregoing Voting Paper had been duly adopted and that the decision so taken was the decision of the International Commission in the matter aforesaid.

⁶ Commissioner Pearson, who participated in the first vote on the present case, retired from the Membership of the Commission on 8th October 1954 and therefore did not vote on Voting Paper V.P.(O.M.)(54)24.

⁷ At the time when V.P.(O.M.)(54)24 was issued Commissioner L. B. Holthuis was on Leave of Absence from his duties as a Commissioner, but before leaving Leiden, he had signified in a letter dated 25th September 1954 his approval of the proposals submitted in the above Voting Paper and had asked that he might be recorded as having voted for their adoption.

18. Preparation of the Ruling given in the present "Direction":

On 27th March 1955 Mr. Hemming prepared the Ruling given in the present *Direction* and at the same time signed a Certificate that the terms of that Ruling were in complete accord with the proposal approved by the International Commission in its Vote on Voting Paper V.P.(54)58, as supplemented by its Vote on Voting Paper V.P.(O.M.)(54)24.

19. Original references : The following are the original references for the generic and specific names placed on *Official Lists* and *Official Indexes* by the Ruling given in the present *Direction*:—

Astacus Pallas, 1772, *Spicil. Zool.* **9** : 81

Astacus Fabricius, 1775, *Syst. Ent.* : 413

astacus, *Cancer*, Linnaeus, 1758, *Syst. Nat.* (ed. 10) **1** : 631

Cambaroides Faxon, 1884, *Proc. Amer. Acad. Arts Sci.*, Boston **20** : 149

fluviatilis, *Astacus*, Fabricius, 1775, *Syst. Ent.* : 413

japonicus, *Astacus* De Haan, 1841, *Faun. japon.*, *Crust.* (5) : 164, pl. 35, fig. 9

Potamobius Samouelle, 1819, *Entomologist's usef. Compend.* : 95

20. The following is the reference for the type selection for the genus *Cambaroides* Faxon, 1884, specified in Ruling (4) in the present *Direction* :—Faxon, 1898, *Proc. U.S. nat. Mus.* **20** : 665.

21. The original references for the family-group names placed on the *Official List* and the *Official Index* established for the recording of such names are as follows :—

ASTACINI Latreille, [1802—1803], *Hist. nat. gén. partic. Crust. Ins.* **3** : 32

POTAMOBIIDAE Stebbing, 1893, *Hist. Crust.* : 206

22. At the time of the submission of the application dealt with in the present *Direction*, the expression prescribed for the second portion of the binomen which constitutes the scientific name of a species was the expression "trivial name" and the *Official*

List reserved for recording such names was styled the *Official List of Specific Trivial Names in Zoology*, the word "trivial" appearing also in the title of the *Official Index* reserved for recording rejected and invalid names of this category. Under a decision taken by the Fourteenth International Congress of Zoology, Copenhagen, 1953, the expression "specific name" was substituted for the expression "trivial name" and corresponding changes were made in the titles of the *Official List* and *Official Index* of such names (1953, *Copenhagen Decisions zool. Nomencl.* : 21). The changes in terminology so adopted have been incorporated in the Ruling given in the present *Direction*.

23. The prescribed procedures were duly complied with by the International Commission on Zoological Nomenclature in dealing with the present case, and the present *Direction* is accordingly hereby rendered in the name of the said International Commission by the under-signed Francis Hemming, Secretary to the International Commission on Zoological Nomenclature, in virtue of all and every the powers conferred upon him in that behalf.

24. The present *Direction* shall be known as *Direction Twelve* (12) of the International Commission on Zoological Nomenclature.

DONE in London, this Twenty-Seventh day of March Nineteen Hundred and Fifty-Five.

*Secretary to the International Commission
on Zoological Nomenclature*

FRANCIS HEMMING